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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,206	07/05/2005	Jurgen Schmidt-Thummes	273621US0PCT	7671
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
			EXAMINER	
			BERNSHTEYN, MICHAEL	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			03/19/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/541,206	Applicant(s) SCHMIDT-THUMMES ET AL.	
	Examiner MICHAEL M. BERNSHTEYN	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/05/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

eDETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8, lines 2 and 3 accordingly recites the expressions “if desired” and “or further”, thus the claim is generally narrative and indefinite, failing to conform with current U.S. practice. It appears to be a literal translation into English from a foreign document and is replete with grammatical and idiomatic errors.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ostrowicki et al. (U.S. Patent 5,910,534) in view of Basu (U.S. Patent 4,458,057).

With regard to the limitations of claim 1, Ostrowicki discloses a process for preparing stable, aqueous dispersions of copolymers obtainable by emulsion polymerisation of

- a) from 20 to 80 parts by weight of conjugated aliphatic dienes,
- b) from 20 to 80 parts by weight of vinyl aromatic compounds,
- c) from 0.1 to 10 parts by weight of ethylenically unsaturated carboxylic acids and/or dicarboxylic acids,
- d) from 0 to 20 parts by weight of ethylenically unsaturated carboxylic acid nitrites and
- e) from 0 to 20 parts by weight of copolymerisable vinyl compounds differing from component b)

in the presence of water and of 0.1 to 5 parts by weight of emulsifiers, referred to 100 parts by weight of components a) to e), and in the presence of water-soluble initiators, the emulsifiers used being

f) sulphuric acid half-esters of ethoxylated fatty acid alcohols and/or

g) salts of esters and half-esters of alkylpolyoxyethylene sulphosuccinates, g)
salts of esters and half-esters of alkylpolyoxyethylene sulphosuccinates,

moreover with 15 to 85 wt. % of the total of the emulsifiers used being added within the time in which up to 40% of the overall conversion of the components used is attained, and with 1 to 50% of the carboxylic acid groups contained in component c) being neutralized by the addition of bases during the emulsion polymerization (col. 1, line 65 through col. 2, line 25).

The only difference between the claimed process for preparing a stable aqueous copolymer dispersion and the prior art is that the partial neutralization of the ethylenically unsaturated carboxylic acids and/or dicarboxylic acids occurs prior to the polymerization.

Basu discloses that a process for making vinyl polymer particles that are spherical, highly porous and of uniform size and substantially no polymer buildup on the reactor surfaces. A dispersion or emulsion is first formed with high agitation comprised of an aqueous medium containing a water-insoluble suspending or dispersing agent, the monomer or monomers to be polymerized, a monomer-soluble free radical yielding catalyst, and a surfactant or surfactant system. The dispersion is neutralized with an alkali and then polymerized with stirring to a conversion of about 10% to about 30% and

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then continuing the reaction to completion with increased stirring, the stirring in both instances being no greater than that used in making the dispersion or emulsion. The dispersing agent employed comprises an unneutralized crosslinked interpolymer of one or more carboxylic acid monomers with a polyunsaturated compound having a plurality of terminally unsaturated polymerizable groups (abstract).

Basu discloses that after forming the dispersion or emulsion of the polymerization reaction ingredients and **prior to polymerization** thereof, it is necessary, and most important to partially neutralize the reaction medium, and mainly the dispersing agent therein, in order to insure the stabilization of the monomer droplets therein during the subsequent stirred reaction period. This neutralization is accomplished by adding to the reaction medium, **prior to the start of the polymerization reaction**, a water-soluble base, such as sodium hydroxide, in order to adjust the pH of said medium in a range of about 4.0 to about 7.0 (col. 3, line 65 through col. 4, line 7).

Both references are analogous art because they are from the same field of endeavor concerning the processes for producing stable aqueous dispersions of vinyl copolymers.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ that the partial neutralization of the ethylenically unsaturated carboxylic acids and/or dicarboxylic acids occurs prior to the polymerization as taught by Basu in Ostrowicki's process for producing stable aqueous dispersions of copolymers in order to in order to insure the stabilization of the monomer

droplets therein during the subsequent stirred reaction period (US'057, col. 3, line 65 through col. 4, line 7), and thus to arrive at the subject matter of instant claim 1.

With regard to the limitations of claims 2-8, Ostrowicki discloses that the aqueous dispersions are prepared as follows. Distilled water at approximately 85⁰C, chelating agent, a portion of emulsifier and initiator and polymer seed latex (having an average particle size of approximately 35 nm, for example, based on styrene and acrylate) are placed in a polymerisation vessel and heated to about 85⁰C, with stirring. The polymerisation vessel is flushed with nitrogen and the inflows of monomers, emulsifiers, bases, initiators and molecular-weight controllers are started and maintained over the duration of the polymerisation. The reaction temperature is then maintained for approximately 1 to 4 hours. At this point the latex has a solids content of about 50%. The pH value is adjusted to 7.0 by means of ammonia.

The aqueous dispersions of copolymers based on aliphatic, conjugated dienes and vinyl aromatic compounds have a solids content (proportion of polymer) preferably of from 40 to 65%, in particular from 45 to 60% (col. 5, lines 4-22).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Randy Gulakowski/
Supervisory Patent Examiner, Art Unit 1796

/Michael M. Bernshteyn/
Examiner, Art Unit 1796

/M. M. B./
Examiner, Art Unit 1796